

## CLAIMS

1        1. (currently amended) A method for reducing interference between two or more  
2 communication systems that share a common wireless transmission medium, the method comprising:  
3                transmitting one or more first-standard messages conforming to a first communication standard  
4 associated with a first of the communication systems in a first-standard beacon period for the first  
5 communication standard, wherein:

6                the one or more first-standard messages are designed to notify one or more nodes  
7 conforming to the first communication standard of (1) the existence of a contention free period (CFP) for  
8 the first communication system[[;]] and (2) the existence of a contention access period (CAP) for the first  
9 communication system; and

10                transmitting one or more second-standard messages conforming to a second communication  
11 standard different from the first communication standard, associated with a second of the communication  
12 systems in a second-standard beacon period for the second communication standard, wherein:

13                the one or more second-standard messages are designed to notify one or more nodes  
14 conforming to the second communication standard of (1) the existence of a CFP for the second  
15 communication system and (2) the existence of a CAP for the second communication system; and

16                timing of the CFPs and CAPs for the first and second communication systems is  
17 coordinated such that:

18                [[the]] a CFP for the first communication system spans (1) a CFP for [[a second  
19 or]] the second communication system[[s conforming to a second communication standard different from  
20 the first communication standard]] and (2) a second-standard beacon period; and

21                a CAP for the second communication system spans (1) a CAP for the first  
22 communication system and (2) a first-standard beacon period.

1        2. (currently amended) The invention of claim 1, wherein the CFP for each node  
2 conforming to the first communication system spans the CFP for the second communication system as  
3 well as a subsequent beacon period standard is allowed to contend for access to the common wireless  
4 transmission medium only during the CAPs for the second communication system standard.

1        3. (currently amended) The invention of claim 1, wherein:  
2                the one or more first-standard messages enable the one or more nodes conforming to the first  
3 communication standard to access the common wireless transmission medium during a [[contention  
4 access period (CAP)]] CAP for the second communication system; and

5                   the one or more first-standard messages disable the one or more nodes conforming to the first  
6 communication standard from accessing the common wireless transmission medium during each CFP for  
7 the second communication system.

1                   4. (currently amended) The invention of claim 1, wherein transmitting the one or more  
2 first-standard messages comprises transmitting a first message conforming to the first communication  
3 standard to notify the one or more nodes conforming to the first communication standard of the  
4 beginning of the CFP for the first communication system.

1                   5. (original) The invention of claim 4, wherein the first message is transmitted at the end of  
2 a CAP for the second communication system.

1                   6. (original) The invention of claim 4, wherein the first message identifies the duration of  
2 the CFP for the first communication system.

1                   7. (currently amended) The invention of claim 4, wherein transmitting the one or more  
2 first-standard messages further comprises transmitting a second message conforming to the first  
3 communication standard to notify the one or more nodes conforming to the first communication standard  
4 of the end of the CFP for the first communication system.

1                   8. (original) The invention of claim 7, wherein the second message is transmitted at the  
2 beginning of a subsequent CAP for the second communication system.

1                   9. (original) The invention of claim 1, wherein:  
2                   the common wireless transmission medium is a wireless channel;  
3                   the first communication standard is IEEE 802.11; and  
4                   the second communication standard is IEEE 802.15.3.

1                   10. (original) The invention of claim 9, wherein the first and second messages are  
2 transmitted from a node that functions as both an IEEE 802.11 access point and an IEEE 802.15.3  
3 piconet controller.

1                   11. (original) The invention of claim 1, further comprising transmitting a beacon frame for  
2 the second communication system after the end of the CFP for the second communication system.

1           12. (original) The invention of claim 1, wherein the one or more messages are transmitted  
2 over the common wireless transmission medium.

1           13. (currently amended) A combined node comprising:  
2           (a) a first transceiver conforming to a first communication standard;  
3           (b) a second transceiver conforming to a second communication standard different from the  
4 first communication standard; and  
5           (c) a controller adapted to coordinate operations of the first and second transceivers,  
6 wherein:

7                 the first transceiver is part of a first communication system conforming to the first  
8 communication standard;

9                 the second transceiver is part of a second communication system conforming to the  
10 second communication standard;

11                 the first and second communication systems share a common wireless transmission  
12 medium;

13                 the first transceiver is adapted to transmit one or more first-standard messages  
14 conforming to the first communication standard, wherein:

15                 the one or more first-standard messages are designed to notify one or more other  
16 nodes conforming to the first communication standard of (1) the existence of a contention free period  
17 (CFP) for the first communication system[[;]] and (2) the existence of a contention access period (CAP)  
18 for the first communication system;

19                 the second transceiver is adapted to transmit one or more second-standard messages  
20 conforming to the second communication standard, wherein:

21                 the one or more second-standard messages are designed to notify one or more  
22 other nodes conforming to the second communication standard of (1) the existence of a CFP for the  
23 second communication system and (2) the existence of a CAP for the second communication system,  
24 CHARACTERIZED IN THAT the controller is adapted to coordinate timing of the CFPs and CAPs for  
25 the first and second communication systems such that:

26                 [[the]] a CFP for the first communication system spans (1) a CFP for the second  
27 communication system and (2) a second-standard beacon period; and

28                 a CAP for the second communication system spans (1) a CAP for the first  
29 communication system and (2) a first-standard beacon period.

1           14. (currently amended) The invention of claim 13, wherein ~~the CFP for each node~~  
2 ~~conforming to the first communication system spans the CFP for the second communication system as~~  
3 ~~well as a subsequent beacon period standard is allowed to contend for access to the common wireless~~  
4 ~~transmission medium only during the CAPs for the second communication system standard.~~

1           15. (original) The invention of claim 13, wherein:  
2           the one or more messages enable the one or more nodes conforming to the first communication  
3           standard to access the common wireless transmission medium during a contention access period (CAP)  
4           for the second communication system; and  
5           the one or more messages disable the one or more nodes conforming to the first communication  
6           standard from accessing the common wireless transmission medium during each CFP for the second  
7           communication system.

1           16. (original) The invention of claim 13, wherein the first transceiver is adapted to transmit  
2           a first message conforming to the first communication standard to notify the one or more nodes  
3           conforming to the first communication standard of the beginning of the CFP for the first communication  
4           system.

1           17. (original) The invention of claim 16, wherein the first message is transmitted at the end  
2           of a CAP for the second communication system.

1           18. (original) The invention of claim 16, wherein the first message identifies the duration of  
2           the CFP for the first communication system.

1           19. (original) The invention of claim 16, wherein the first transceiver is further adapted to  
2           transmit a second message conforming to the first communication standard to notify the one or more  
3           nodes conforming to the first communication standard of the end of the CFP for the first communication  
4           system.

1           20. (original) The invention of claim 19, wherein the second message is transmitted at the  
2           beginning of a subsequent CAP for the second communication system.

1           21. (original) The invention of claim 13, wherein:  
2           the common wireless transmission medium is a wireless channel;

3 the first communication standard is IEEE 802.11; and  
4 the second communication standard is IEEE 802.15.3.

1 22. (original) The invention of claim 21, wherein:  
2 the first transceiver functions as an IEEE 802.11 access point;  
3 the second transceiver functions as an IEEE 802.15.3 piconet controller.

1 23. (original) The invention of claim 13, wherein the second transceiver is adapted to  
2 transmit a beacon frame for the second communication system after the end of the CFP for the second  
3 communication system.

1 24. (original) The invention of claim 13, wherein the one or more messages are transmitted  
2 over the common wireless transmission medium.

1 25-30. (canceled)